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UM professor spearheads research on cultivating huckleberries as Montana forest product

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UM PROFESSOR SPEARHEADS RESEARCH
ON CULTIVATING HUCKLEBERRIES AS MONTANA FOREST PRODUCT

By Carol Susan Woodruff
UM News and Publications

If University of Montana forestry Professor Nellie Stark has her way, Montana will someday be known as the huckleberry pie capital of the country and perhaps of the world.

For the past 2 1/2 years, Stark has led research efforts at UM aimed at cultivating the prized berry as an agricultural crop. The fruit, as every Montanan knows, is the small, slightly tart and often elusive berry that lures pickers into the Montana hills every summer. Fewer Montanans realize that the berry is actually one of the larger wild blueberries.

"The idea of cultivation is as a supplement to the wild huckleberry industry," says Stark, a forest ecologist and veteran of 14 years at UM. "The advantage of going the cultivated route is that we can control some of the adverse effects that ruin the crops from year to year in the wild, such as drought, shallow snow depth and freezing damage."

If Stark's project succeeds, someday Montana huckleberries will no longer be harvested by the few for the few, but will be grown commercially for local, national and international markets.

While studying rejuvenation of decadent berry fields and the effects of climate, soil and fertilizer on wild huckleberries, Stark and her assistants

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have gathered huckleberry seeds from throughout the West. These seeds have produced about 3,000 plants in UM's greenhouse.

Some of the seeds collected seemed to hail from disease-, drought- or cold-resistant families and some from strains with exceptionally high berry production or especially large berries. Other plants in the study having desirable breeding qualities are "super plants" -- ones that Stark says are up to four or five times taller than other huckleberry plants growing in the same soil and environment.

In the building's relatively controlled climate, Stark and her assistants are testing the plants' response to various soils and temperatures. Research plots in the Trout Creek area and UM's Lubrecht Experimental Forest offer further insights into the life cycle of the huckleberry plant.

"We have extensive data now on what differences occur in the soil as it relates to the balance of nutrients," Stark says. "We know that certain soils are much better for cultivating berries than others."

She says the most desirable -- but not the only -- type of soil for growing good huckleberries is ash cap, fallout from early volcanic eruptions. In addition to thriving in ash cap, huckleberry plants grow best at higher elevations in areas shaded about a third of the daylight hours. They also require plenty of moisture and no long periods of drying, Stark says.

A major thrust of Stark's research is learning whether huckleberries can be cultivated at lower elevations. With the help of county extension agents in northwestern Montana, she has lined up 10 owners of lowland in Lincoln and Sanders counties who are interested in having her transplant some of the greenhouse seedlings to their property. The sites were chosen on the basis of

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suitable soils and climate.

Initially Stark hopes to transplant about 300 seedlings to each of the 10 parcels of land. To help ensure the success of the operation, Stark is raising the seedlings in "super tubes" -- plastic containers, normally used for raising tree seedlings, that will allow the huckleberry plants' small, fragile root systems to be transplanted intact.

Irrigation and fertilization also may be essential to the success of cultivating huckleberries, Stark says.

It will take three years after transplanting for the plants to produce berries, she says, and by six years, the plants should be at full production. The landowners will own the berries, but Stark will measure them before they are harvested.

If the plants thrive, Stark plans to work with Montana nurseries to develop a commercial source of seedlings. She expects that at this point landowners will join the ranks of berry producers and form a huckleberry-grower's co-op.

Stark would work with the nurseries and growers to help them choose the right soils and best cultivation methods. When the growers have more than enough berries for the local market, she would encourage them to hire a market analyst and an advertising agent to explore and develop national and foreign markets for the fruit.

"Cultivated blueberries are on virtually every grocery store shelf in the country, but they're expensive," she says. "One of my objectives is to produce a better-tasting berry, a better pie berry and a less expensive berry so that it would be attractive to people."

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Stark says an alternative to cultivating berries on lowlands might be cropping the wild berries on marginal timber land leased from landowners interested in deriving a second income from their property. Another possibility is cultivating huckleberries in cherry orchards, which lack the ideal soil for the plants but could provide just the right amount of shade.

While it would not be feasible to use mechanical pickers in steep wild-huckleberry fields, Stark thinks the pickers could eventually be used in commercial berry harvesting. As for the wild berries, she believes that a boom in the huckleberry industry would allow high-school students to earn money during the summer by picking the fruit and thinning the competing brush around the plants.

Stark firmly believes in the marketability of Montana huckleberries. "In my opinion, we may have the best pie berry in the world," she says. "It outdoes anything that's called a blueberry on the market."

She says the berry is more tart and flavorful than other so-called huckleberries, which some scientists now believe may be a different species from the Montana fruit. In informal taste tests she has conducted using huckleberries from Montana, Maine, Michigan, Washington and Oregon, subjects have consistently preferred the Montana berry and been able to identify its origin.

One drawback to the Montana berry is its tendency to "bleed" when picked -- which makes it saleable only in local fresh markets. But Stark says the fruit's acidity makes it ideal for canning, freezing and using in berry products such as the popular huckleberry chocolates. And she thinks that if fine Montana restaurants offered huckleberry pie year-round, it would be a

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great boon to the state's tourism industry.

Turning Montana's fledgling huckleberry business into a major industry will take a lot of time, patience and hard work. But Stark is convinced her goal is attainable.

"A thriving huckleberry industry in Montana can be a reality if we are ready to make the sacrifices to learn how to manage the berry fields effectively," Stark once wrote. "We can turn pie-in-the-sky into pie-on-the-plate!"

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